

Oral Testimony of Jay McKenna CEO, Nacero Inc.

House Committee on Agriculture

April 5, 2022

Energy - Renewable Energy Opportunities in Rural America

Thank you Chairman Scott, Ranking Member Thompson, and members of the Committee for holding this important hearing. My name is Jay McKenna, and I am the co-founder and CEO of Nacero Inc., a Houston based company that is developing large-scale facilities that will make affordable, lower and net-zero lifecycle carbon footprint gasoline from 100% domestic natural gas and renewable natural gas.

Nacero will be the affordable climate solution for everyday drivers. Our gasoline will be ethanol blend-compliant and useable in today's cars and trucks without modification, thereby making it possible for everyday American drivers to economically reduce greenhouse gas emissions and strengthen American energy independence without having to change their habits, buy a new car, or pay more at the pump.

I want to emphasize this point. Nacero's fuels drop directly into America's pipes, pumps, cars, and trucks without modification.

Americans drive 3.2 trillion miles per year, the equivalent of 500 round trips from Earth to Pluto, using vehicles that stay on the road for an average of 12 years, and potentially longer now given our longer road to economic recovery. As long as these vehicles are on the road, we need to do everything we can to make a better fuel with a lower lifecycle carbon footprint.

We are building multiple large-scale manufacturing facilities that will use proven technology and incorporate carbon capture and 100% locally sourced renewable power. Our gasoline made from natural gas will have half the lifecycle Scope 1, 2, and 3 carbon footprint of gasoline made from traditional crude oil refining. Incorporating renewable natural gas will bring lifecycle carbon footprint of our gasoline to net-zero.

The first of these facilities, located outside of Odessa, TX will have the ability to serve 4.5 million everyday drivers, support thousands of construction and operating jobs, and generate \$25 billion for the local and regional community. We plan to break ground later this year and are looking to build additional such facilities across Texas and the United States.

America's farming community has much to gain. We plan to be a major new consumer of renewable natural gas from dairy, swine, poultry, food waste, and landfill gas projects, materially growing demand for these critical resources. We forecast that each of our facilities could support RNG demand from 75 – 100 new digester units, stimulating billions of dollars of new capital investment, creating thousands of new skilled jobs in rural America, and generating substantial new income streams for the farming community.

This isn't pie in the sky. The technology is proven, the market is there, and consumers are interested now more than ever. With Nacero, everyday drivers, especially those in farming communities and rural America, can play a critical role in making real climate progress while, in parallel, ushering a new era of domestic energy security and economic prosperity.

I greatly appreciate the opportunity speak to the Committee today and look forward to answering your questions.

Lower and Net-Zero Lifecycle Carbon Footprint Gasoline from 100% Domestic Natural Gas and Renewable Natural Gas

It takes two barrels of crude oil, much of which is imported,¹ to make one barrel of gasoline.² The other barrel becomes byproducts, some of which have renewable alternatives, others of which have no market in the U.S. Using domestic natural gas to make gasoline avoids the production of crude oil refinery byproducts as well as the carbon drag associated with importing crude oil to make gasoline and exporting byproducts that cannot be sold here. Together they cut Scope 1 – 3 emissions for the production of gasoline by half.³ Integrating carbon capture and renewable power and substituting renewable natural gas (RNG) from farms and landfills for conventional natural gas can take the Scope 1 – 3 lifecycle carbon footprint of gasoline made from natural gas to net-zero.⁴

Compressed natural gas (CNG) has demonstrated the potential to put biomethane to beneficial use, to the benefit of both farmers and the environment. Gasoline has the potential to greatly increase its use because gasoline can be used in all cars and trucks without modification of the vehicle or the distribution network. Opening access to everyday drivers will increase demand for RNG while continuing to include ethanol and biofuels in our energy mix.

Nacero's first facility, a shovel ready, 93,000 barrel per day natural gas and renewable natural gas to gasoline manufacturing facility in Penwell, Texas, eight miles east of Odessa, could double demand for agricultural biogas and support billions of dollars of investment in 75 to 100 new digesters and the additional farm income they would produce.

This scalable approach to lower and net-zero lifecycle carbon footprint gasoline also holds great promise for American energy independence and greenhouse gas reduction. Nacero's Penwell facility alone could reduce crude oil import demand by 200,000 barrels a day (the amount the U.S. imported from Russia prior to the embargo),⁵ and avoid up to 50 million tons per year of lifecycle CO₂e emissions.⁶

The technology is proven,⁷ the pipelines are in place, and construction and operation will create thousands of jobs and add billions to local economies.⁸

¹ <https://www.eia.gov/tools/faqs/faq.php?id=727&t=6>

² <https://www.eia.gov/tools/faqs/faq.php?id=327&t=9>

³ See report by Trinity Consultants dated March 2, 2021, commissioned by Nacero, Inc., the developer of the Penwell project, which found that the Scope 1-3 emissions of a natural gas to gasoline facility with a 93,000 bpd gasoline production capacity would have a 25mm metric ton per year lifecycle carbon footprint and that a crude oil refinery of equivalent gasoline production capacity would have a lifecycle carbon footprint of 56M metric ton per year. <https://www.datocms-assets.com/41690/1617418475-carbon-savings-report.pdf>

⁴ Nacero estimates that a 23/77 RNG/NG feedstock mix will bring the Penwell facility to net zero.

⁵ <https://www.reuters.com/business/energy/us-imports-russian-oil-refined-products-2022-03-08/>. A 93,000 bpd gasoline refiner would consume 208,000 bpd of crude oil, as noted in the Trinity report and supported by EIA's crude-to-gasoline ratio (footnote 2).

⁶ <https://www.motortrend.com/news/gasoline-so-clean-its-like-swapping-to-11-million-evs/>

⁷ <https://www.topsoe.com/processes/synthetic-fuels/methane-rich-gas-to-gasoline>

⁸ The Bureau of Business Research, IC2 Institute, The University of Texas at Austin, "Economic Assessment of Nacero's Planned Investment: State of Texas, Permian Basin, and Ector County Impacts, 2022-2077," (2021). The Bureau of Business Research estimated \$27.8Bn GDP impact to the regional economy through all construction and operational activities. EPCs bidding the project are currently estimating 1500 concurrent construction jobs and 350 operating jobs.